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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JI-SOOK KIM, GUI-JUNG LEE, and SOON-PHIL LEE

Appeal 2009-009655
Application 10/775,249¹
Technology Center 2600

Decided: February 26, 2010

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY, and MARC S.
HOFF, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The real party in interest is Samsung Electronics Co., Ltd.

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 21-26, 28-33, 35, and 36.² We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

Appellants' invention relates to a method for operating services of wired and wireless phones interconnectively. When a subscriber uses wired and mobile communications services and a party makes a call to one of the two phones, the subscriber can respond to the call with both terminals (Spec. ¶ 0019). When the wired phone is called, the call can be simultaneously terminated in a private mobile communication network operated by a wired and wireless interconnecting apparatus through an existing wired phone service and an assigned wireless terminal (Spec. ¶ 0020). A virtual wired phone number can be provided to a subscriber using a wireless terminal, including caller ID information transmitted to the called party such that it appears that the subscriber is using wired phone service (Spec. ¶ 0021).

Claim 21 is exemplary of the claims on appeal:

21. A system for operating wired and wireless phone services interconnectively, the system comprising:

a private base station controller (pBSC) which is connected to a public switched telephone network (PSTN) and a private base station transceiver system (pBTS), and which provides a mobile communication service to a plurality of mobile communication terminals; and

a group exchange which is connected to the PSTN, and which assigns a respective virtual wired phone number to each respective mobile communication terminal existing in a mobile zone as a management region of the pBTS, and which provides a public wired phone service to said each respective mobile communication terminal using the respective virtual wired

² Claims 1-20, 27, and 34 have been canceled.

phone number, and which provides a wired phone service to a wired terminal existing outside the mobile zone;

wherein, when receiving a request for an outgoing service from an internal mobile communication terminal, the group exchange changes a caller identification (CID) into the respective virtual wired phone number assigned to the internal mobile communication terminal, and calls a called terminal via the PSTN.

The Examiner relies upon the following prior art in rejecting the claims on appeal:

Cyr	US 6,223,055 B1	Apr. 24, 2001
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Bedingfield	US 2004/0110465 A1	Jun. 10, 2004
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Claims 21-26, 28-33, 35, and 36 stand rejected under 35 U.S.C.

§ 103(a) as being unpatentable over Cyr in view of Bedingfield.

Throughout this decision, we make reference to the Appeal Brief (“App. Br.,” filed July 11, 2008), the Reply Brief (“Reply Br.,” filed January 30, 2009) and the Examiner’s Answer (“Ans.,” mailed November 28, 2008) for their respective details.

ISSUES

With respect to independent claims 21 and 30, Appellants argue that Cyr does not teach a private base station transceiver system (pBTS) (App. Br. 10); that neither Cyr nor Bedingfield teaches assignment of respective virtual wired phone numbers (App. Br. 11); and specifically that Bedingfield is directed to changing the caller ID to the virtual phone number associated with the called wireless number, rather than the calling number (Reply Br. 20).

With respect to dependent claim 28, Appellants argue that Bedingfield does not teach that the private base station controller (pBSC) checks a

service type identifier defining which of a private network service and a public network service is requested (App. Br. 13).

With respect to dependent claim 29, Appellants argue that Cyr does not teach relaying an outgoing call to the group exchange when the internal mobile communication terminal requests the private network service, and relaying an outgoing call to a public land mobile network when the internal mobile communication terminal requests the public network service (App. Br. 14).

With respect to dependent claim 33, Appellants argue that Cyr does not teach rerouting an incoming call when the called wired terminal and mobile communication terminal make no response (App. Br. 16).

Appellants' contentions present us with the following issues:

1. Have Appellants shown that the Examiner erred in finding that Cyr teaches a private base station transceiver system (pBTS)?
2. Have Appellants shown that the Examiner erred in finding that Bedingfield teaches assigning a respective virtual wired phone number to each respective mobile communication terminal existing in a mobile zone as a management region of the pBTS?
3. Have Appellants shown that the Examiner erred in finding that Bedingfield teaches that, when receiving a request for an outgoing service from an internal mobile communication terminal, the group exchange changes a caller identification (CID) into the virtual wired phone number assigned to the internal mobile communication terminal?
4. Have Appellants shown that the Examiner erred in finding that Bedingfield teaches that the private base station controller (pBSC) checks a

service type identifier defining which of a private network service and a public network service is requested?

5. Have Appellants shown that the Examiner erred in finding that Cyr teaches relaying an outgoing call to the group exchange when the internal mobile communication terminal requests the private network service, and relaying an outgoing call to a public land mobile network when the internal mobile communication terminal requests the public network service?

6. Have Appellants shown that the Examiner erred in finding that Cyr teaches rerouting an incoming call when the called wired terminal and mobile communication terminal make no response?

FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

The Invention

1. According to Appellants, the invention concerns a method for operating services of wired and wireless phones interconnectively. A virtual wired phone number can be provided to a subscriber using a wireless terminal, including caller ID information transmitted to the called party such that it appears that the subscriber is using wired phone service (§ 0021).

Cyr

2. Cyr teaches a wireless base station 130 (Fig. 1; col. 3, ll. 11-19) that corresponds to the claimed pBTS.

3. Cyr teaches that “[t]he first step 210 in the method of routing a call to a given extension number is the receipt of a call for a wired extension

150 at the PBX 140; the origin of the call may be from another wired extension 150 or a wireless terminal 120 within the in-building communications system 110, or the call may originate external to the in-building communications system 110” (col. 3, ll. 43-49). Further, “calls to a subscriber’s PBX extension may be delivered to the subscriber anywhere in the public wireless network 102” (col. 4, l. 67 – col. 5, l. 2).

Bedingfield

4. Bedingfield teaches assigning a respective virtual wired phone number to each respective mobile communications terminal existing in a mobile zone as a management region of the pBTS (Bedingfield ¶¶ 0037-0040, 0045-0049).

5. When the wireless subscriber at the conventional wireless telephone number calls a wireline party, via the wireless carrier network 34, the conventional wireless telephone number is associated with a virtual telephone number within the wireline carrier network 32. The telephone call is then routed to the wireline carrier network 32 associated with the virtual telephone network (¶ 0049).

6. Bedingfield teaches that wireline network 32 operates over industry standard communication protocols, including signaling system 7 (SS7) (¶ 0034).

PRINCIPLES OF LAW

On the issue of obviousness, the Supreme Court has stated that “the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation.” *KSR Int’l Co. v. Teleflex Inc.*,

550 U.S. 398, 419 (2007). Further, the Court stated “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. “One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *Id.* at 419-20.

ANALYSIS

CLAIMS 21-25, 30-32, 35, AND 36

We select claim 21 as representative of this group of claims, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

Appellants first argue that Cyr does not teach the claimed private base station transceiver system (pBTS) (App. Br. 10). Second, after noting that the Examiner concedes that Cyr does not teach the assignment of respective virtual wired phone numbers, Appellants argue that Bedingfield does not teach, when receiving a request for outgoing service from an internal mobile communication terminal, that the group exchange changes a caller identification (CID) into the respective virtual wired phone number assigned to the internal mobile communication terminal, as claims 21 and 30 require (App. Br. 11).

We are not persuaded by Appellants’ arguments. The Examiner finds, and we agree, that Cyr teaches a wireless base station 130 that corresponds to the claimed pBTS (FF 2). The Examiner further finds, and we agree, that Bedingfield teaches assigning a respective virtual wired phone number to each respective mobile communications terminal existing in a mobile zone as a management region of the pBTS (Ans. 4-5; FF 4). Further, we agree

with the Examiner's finding that Bedingfield teaches changing a CID into the respective virtual wired phone number assigned to the internal mobile communication terminal (FF 5).

Appellants further argue, citing paragraph 0045 of Bedingfield, that Bedingfield teaches only changing the CID to the virtual phone number associated with the called wireless number, not the calling wireless number (Reply Br. 20). We find this argument unpersuasive of Examiner error because we agree with the Examiner's finding that Bedingfield does teach changing the CID to the virtual phone number associated with a calling wireless number. "When the wireless subscriber at the conventional wireless telephone number calls a wireline party ... the conventional wireless telephone number is associated with a virtual telephone number within the wireline carrier network 32" (FF 5). "The telephone call is then routed to the wireline carrier network associated with the virtual telephone number" (*Id.*).

Because Appellants have not demonstrated error in the Examiner's rejection of representative claim 21 under § 103, we will sustain the rejection of claims 21-25, 30-32, 35, and 36.

CLAIM 26

Appellants contend that Bedingfield does not teach that the group exchange is connected to the publicly switched telephone network (PSTN) through "No. 7 signaling." We consider this argument unpersuasive because we agree with the Examiner's finding that Bedingfield teaches that wireline network 32 operates over industry standard communication protocols, including signaling system 7 (SS7) (FF 6). Figure 2 of Bedingfield illustrates that the wireline network is connected to PSTN 46. Appellants' Reply Brief

contains no rebuttal to the Examiner's position that the SS7 protocol corresponds to the claimed "No. 7 signaling."

As such, we find no error in the Examiner's rejection of claim 26 under § 103, and we will sustain the rejection.

CLAIM 28

Appellants argue that the Examiner's rejection is erroneous because Bedingfield does not teach, when receiving a request for outgoing service from the internal mobile communications terminal, the private base station controller (pBSC) checks a service type identifier defining which of a private network service and a public network service the internal mobile communication terminal requests (Br. 13). In Appellants' view, Bedingfield fails even to mention a private communications service or a public communications service (*Id.*).

We find Appellants' position persuasive of Examiner error. The Examiner finds that Bedingfield teaches that the wireline telephone service provider, wireless telephone service provider, and/or packet voice-based telephone service provider each store a subscriber profile in respective databases (Ans. 15). The service control point (SCP) or service switching point (SSP) of Bedingfield is said to route a telephone call to the appropriate telecommunications network, whereby the service type identifier is being associated with the subscriber's service profile (Ans. 16). We agree that Bedingfield discloses that a telephone call is (by some undisclosed method) routed to the appropriate telecommunications network. We have reviewed Figure 4 and corresponding paragraphs 0039 and 0040 of Bedingfield, however, and we do not find a teaching that the private base station

controller (pBSC) checks a service type identifier defining which network service the internal mobile communication terminal requests.

The Examiner's proposed combination of Cyr and Bedingfield thus fails to teach every element of the invention recited in claim 28.

Accordingly, we will not sustain the rejection of claim 28 under § 103.

CLAIM 29

The Examiner concludes that the combination of Cyr and Bedingfield renders claim 29 obvious, finding that Cyr teaches relaying an outgoing call to the group exchange when the internal mobile communication terminal requests the private network service, and relaying an outgoing call to a public land mobile terminal (PLMN) when the internal mobile communication terminal requests the public network (Ans. 17). The Examiner cites to column 3, and columns 4-5, of Cyr as illustrating this limitation (Ans. 17).

At column 3, lines 43-49, however, Cyr teaches that “[t]he first step 210 in the method of routing a call *to* a given extension number is the receipt of a call *for* a wired extension 150 at the PBX 140; *the origin of the call may be from another wired extension 150 or a wireless terminal 120 within the in-building communications system 110, or the call may originate external to the in-building communications system 110*” (FF 3; emphasis added). This section of Cyr is clearly directed to the handling of an incoming call, rather than an outgoing call as claimed.

In a similar way, the section bridging columns 4 and 5 of Cyr is concerned with handling an incoming call: “calls *to* a subscriber's PBX extension may be delivered to the subscriber anywhere in the public wireless network 102” (FF 3).

We find that Appellants have shown that the Examiner erred in finding that Cyr relays an outgoing call in the manner recited in claim 29. Therefore, we will not sustain the § 103 rejection of claim 29.

CLAIM 33

Appellants argue that the Examiner's rejection is erroneous because neither Cyr nor Bedingfield teaches rerouting an incoming call to one of a public switched telephone network (PSTN) and a public land mobile network (PLMN) when the called wired terminal and the mobile communication terminal make no response. The Examiner finds that Cyr (col. 3, ll. 20-61) teaches such rerouting when there is no response to a call (Ans. 10).

We have reviewed Cyr, and do not find any teaching that an incoming call is rerouted to either network when the called wired terminal and mobile communication terminal make no response. We therefore find the Examiner's rejection to be erroneous. Accordingly, we will not sustain the Examiner's rejection of claim 33 under § 103.

CONCLUSIONS OF LAW

1. Appellants have not shown that the Examiner erred in finding that Cyr teaches a private base station transceiver system (pBTS).

2. Appellants have not shown that the Examiner erred in finding that Bedingfield teaches assigning a respective virtual wired phone number to each respective mobile communication terminal existing in a mobile zone as a management region of the pBTS.

3. Appellants have not shown that the Examiner erred in finding that Bedingfield teaches that, when receiving a request for an outgoing service

from an internal mobile communication terminal, the group exchange changes a caller identification (CID) into the virtual wired phone number assigned to the internal mobile communication terminal.

4. Appellants have shown that the Examiner erred in finding that Bedingfield teaches that the private base station controller (pBSC) checks a service type identifier defining which of a private network service and a public network service is requested.

5. Appellants have shown that the Examiner erred in finding that Cyr teaches relaying an outgoing call to the group exchange when the internal mobile communication terminal requests the private network service, and relaying an outgoing call to a public land mobile network when the internal mobile communication terminal requests the public network service.

6. Appellants have shown that the Examiner erred in finding that Cyr teaches rerouting an incoming call when the called wired terminal and mobile communication terminal make no response.

ORDER

The Examiner's rejection of claims 21-26, 30-32, 35, and 36 is affirmed. The Examiner's rejection of claims 28, 29, and 33 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

Appeal 2009-009655
Application 10/775,249

AFFIRMED-IN-PART

ELD

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